

Claims

1. Device for determining the partial pressure of at least one gas in a mixture of end expiratory gases comprising:
 - a receiving unit for receiving a volume of end expiratory gas
 - at least one measuring device to determine at least one gas in the end expiratory gas volume and to generate measurement signals; and
 - a unit for display and/or storage and evaluation for recording and further processing of the signals of the at least one measuring device.
2. Device according to claim 1, characterized therein, that the at least one measuring device is an optical measuring device.
3. Device according to claim 2, characterized therein, that the at least one measuring device is an IR-measuring device.
4. Device according to claim 4, characterized therein, that the measured values are stored together with datum, individual data of the individual to be monitored.
5. Device according to one of the preceding claims, characterized therein, that the measurement of the partial pressure of a gas, like pCO₂, is made in the end expiratory gas by IR-absorption of a predetermined gas volume in a predetermined wavelength area in a measurement device.

6. Device according to one of the preceding claims, characterized therein, that it comprises a device for absorbing water from the end expiratory gas.

7. Device according to claim 6, characterized therein, that it comprises an IR measuring cell, that measures the IR-absorption of CO₂, whereas the signal of the IR measuring cell can be stored together with time data, like datum, time or the name of the patient in a memory.

8. Device according to claim 8, characterized therein, that the stored individualized measurement data are comparable with already stored data by a program, whereas a signal is generated if a deviation greater than a predetermined value occurs.

9. Device according to any of the preceding claims, characterized therein, that it comprises an oxygen sensor.

10. Device according to any of the preceding claims, characterized therein, that the end expiratory gas volume is the end expiratory gas volume.

11. Device according to any of the preceding claims, characterized therein that it is a device for monitoring the breathing function, a device for determination of ovulation or a device for monitoring the lung function.

12. Device according to any one of the preceding claims, characterized therein, that it comprises an own power supply and is portable.

13. Method for monitoring fluctuations in the respiratory metabolism of the human or animal body, characterized by the steps:

- obtaining a volume of an end expiratory gas mixture;
- measuring the amount of one or more gases contained in this volume;
- recording of the thus obtained value - optionally together with time and individual data;
- comparing the value/s with a value table and
- generating a signal according to the comparison step, that can be stored, optionally further processed an/or edited.

14. Method according to claim 13, characterized therein that the gas measured is CO₂ or O₂.

15. Method according to claim 13 or 14, characterized therein, that the amount of at least one gas in the end expiratory gas mixture is determined optically.

16. Use of the device according to one of the claims 1 - 12 to determine the breathing function, to monitor oxygen therapy, the fitness in physical exercise.

17. Use of the device according to one of the claims 1 - 12 for determining ovulation by determination of the amount of pCO₂ in end expiratory gas.

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